

## R E M A R K S

Cancelled claim 16 is presented in independent form as new claim 23. Cancelled claim 17 is presented as new claim 24 depending on claim 23.

The Examiner rejects claims 11-15 and 18-22 as being anticipated by Meyer et al. The Examiner relies on col. 3, lines 10-60 for teaching the silicone compound which reads on "the organic silicon compound being silane" and the claimed concentration range. The Examiner also relies on Examples 1 and 7 as teaching the claimed neutralizing agent. This rejection is respectfully traversed.

The present invention relates generally to aqueous cosmetic compositions, in particular for treating the hair, having unpolymerized or relatively unpolymerized, water-soluble organosilicon compounds.

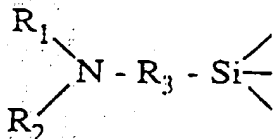
The inventors have found that it is possible to formulate cosmetic compositions not requiring the use of an organic solvent and having an effective, rinse-fast cosmetic effect, without the hair being charged in the event of overloading, by using in these compositions unpolymerized or relatively unpolymerized, water-soluble organosilicon compounds having at least one basic and partially neutralized chemical function.

The application includes claims 11 an 15 as follows:

11. A cosmetic composition comprising, in a cosmetically acceptable aqueous medium, at least 0.02% by weight, relative to the total weight of the composition, of at least one substantially unpolymerized water-soluble organosilicon compound, the organosilicon compound being a silane having one silicon atom or a siloxane having two or three silicon atoms, the organosilicon compound also having at least one basic chemical function and at least two

hydrolyzable or hydroxyl groups per molecule, the composition containing a sufficient amount of a neutralizing agent such that the organosilicon compound is neutralized to a proportion of from 1/1000 to 99/100.

15. The cosmetic composition of claim 11, wherein the organosilicon compound has the formula:



in which:

$R_4$  represents a halogen or an  $OR'$  or  $R'_1$  group;

$R_5$  represents a halogen or an  $OR''$  or  $R'_2$  group;

$R_6$  represents a halogen or an  $OR'''$  or  $R'_3$  group;

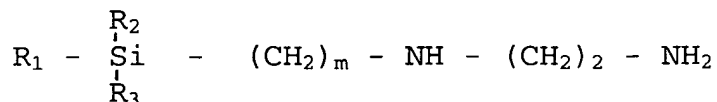
$R_1$ ,  $R_2$ ,  $R_3$ ,  $R'$ ,  $R''$ ,  $R'''$ ,  $R'_1$ ,  $R'_2$  and  $R'_3$  represent, independently of each other, a substituted or unsubstituted, saturated or unsaturated, linear or branched hydrocarbon-based group,

$R_1$ ,  $R_2$ ,  $R'$ ,  $R''$  and  $R'''$  may represent, independently of each other, hydrogen, at least two of the groups  $R_4$ ,  $R_5$  and  $R_6$  being other than the groups  $R'_1$ ,  $R'_2$  and  $R'_3$ .

Mayer et al discloses a method for imparting artificial tan to skin, comprising simultaneously or sequentially contacting the skin with dihydroxyacetone, a secondary polyamine and a color modifier which is selected from an amino acid, a substituted ethylenediamine, a carboxylic acid or a mixture of any two or more of the foregoing. Also included is a composition for immediate application to skin, comprising dihydroxyacetone, at least one secondary polyamine and a color modifier. Further included is a kit for sunless tanning comprising a formulation containing dihydroxyacetone and a formulation containing a secondary polyamine and a color modifier.

The portion of the patent primarily relied in by the Examiner reads as follows:

The above polyamines which are useful in preparing the formulations of the invention include silanols and alkoxy silanes having the general formula:



where  $R_1$  and  $R_2$  are hydroxy and  $R_3$  is hydrogen, hydroxy or an alkyl, cycloalkyl or aryl group having up to about 22 carbon atoms; or  $R_1$  and  $R_2$  are the same or different alkoxy groups having up to about 22 carbon atoms and  $R_3$  is a hydroxy, alkoxy, cycloalkoxy or aryloxy group having up to about 22 carbon atoms; and  $n$  is an integer of 2 or 3.

Secondary polyamines for use in the present invention include N-substituted ethylenepolyamines. In general, it has been found that N-substituted ethylenepolyamines generate browning end products with dihydroxyacetone somewhat more quickly, and in higher yields, than either of N,N'-disubstituted ethylenepolyamines or primary amines. In general, the substituent for an N-substituted ethylenepolyamine will preferably have about 6 to about 22 carbon atoms.

Preferred substituted ethylenediamines for use in the invention are silanols and alkoxy silanes, such as N-3-(trihydroxysilyl)-propyl-ethylenediamine which is commercially available in a 25 percent aqueous solution as HYDROSIL.TM. 2776 from Huls America of Piscataway, N.J., U.S.A.

A color modifier is also present at the time of mixing or applying the DHA and polyamine formulations. For convenience, this color modifier is typically a component of the polyamine formulation, as it is a type of compound which may react prematurely with DHA to form a color if included in that formulation. The color modifier is used in amount ranges similar to those of the polyamine, generally about 0.01 to about 15 percent by weight of their formulations. The molar ratios of polyamine to color modifier range from about 0.01 to about 50.

Mayer also discloses that:

Useful color modifying compounds include: amino acids; substituted ethylenediamines having the formula  $L--(CH_2)_n--NH--(CH_2)_2--NHM$ , wherein L is OH or COOH, M is hydrogen or  $L--(CH_2)_n$ , and each n independently is an integer of 1 to about 22; carboxylic acids having either of the formulae  $HOOC--(CH_2)_n--COOH$  or  $R--CH(OH)--COOH$ , wherein n is an integer up to about 22 and R is hydrogen or an alkyl, cycloalkyl or aryl group having up to about 22 carbon atoms; and mixtures of any two or more of the foregoing.

As is apparent from the above, the particularly preferred secondary polyamine in Mayer et al is N-[(trihydroxysilyl)propyl]ethylenediamine commercially available in a 25% aqueous solution (HYDROSYL 2776). The color modifiers are selected from amino acids, substituted ethylenediamines, carboxylic acids and their mixtures (col. 2, lines 31-37; col. 3, line 61 to col. 4, line 3).

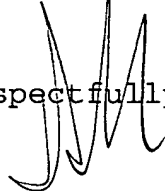
Mayer does not describe compositions containing an organosilicon compound with one silicon atom as defined in claim 11, nor any composition containing an organosilicon compound with two or three silicon atoms as in claim 15. As a matter of fact, the organosilicon compounds of Mayer et al, which are called secondary polyamines, contain an ethylenediamine group  $(-CH_2)_n-NH-(CH_2)_2-CH_2$  while the organosilicon compounds of the present invention contain an amino group  $(-R_3NR_1R_2)$ . Therefore, the present invention as claimed is novel and unobvious over Mayer et al.

Claims 16 has been rewritten as claim 23 to include the limitations of claim 11. Claim 17 has been rewritten as claim 24 and depends from claim 23. Thus, these claims are in condition for allowance.

In view of the foregoing, early and favorable action is respectfully requested.

The Commissioner is hereby authorized to charge any fees due in connection with the present response to Deposit Account 19-4293.

Respectfully submitted,

A handwritten signature in dark ink, appearing to be 'D. Douglas Price', written over the typed name.

D. Douglas Price  
Reg. No. 24,514

STEPTOE & JOHNSON LLP  
1330 Connecticut Ave., N.W.  
Washington, D.C. 20036  
Tel: (202) 429-6748